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April 13, 2004

PCT-Application No.: PCT/IB02/01194
Nokia Corporation at al.
Our ref.: WO 34284 (Frist: 17.4. Eing.)

Reference is made to the Written Opinion of December 19, 2003.

The further prosecution of the present case is to be based on the documents as originally filed.

The assessments concerning the inventiveness of the presently claimed subject matter as set forth in the referenced Written Opinion are respectfully contradicted herewith.

Specifically, this side's understanding of document D1 is that the disclosed teaching concentrates on the selection of an optimal bearer for each data packet based on corresponding quality-of-service requirements, as well as on the routing of the data packets (traffic) on the then selected bearer (see page 1, lines 26-35, of document D1).

Placed before these problems, document D1 teaches a method and system for routing data packets (see claims of document D1). Disclosed is a traffic policy controller (comprised in so-called service support nodes) which "*makes centralized routing policy decisions*" (see page 3, line 15). Further, the

"traffic controller also requests to … reserve resources for a flow when necessary" and it *"selects a downlink bearer on the basis of traffic flow or/and traffic class"* (see page 3, lines 20-23).

That is, it is held on this side that the teaching of document D1 is limited to a policy directed to routing which is aligned along the necessities arising from quality-of-service requirements of respective data packets, i.e. traffic "types".

With such doing of the traffic controller according to document D1, the relevant teaching of this prior art reference however ends, since the *"policy decisions"* made by this traffic controller are limited to this routing topic and no further details are considered.

According to this side's opinion, it results therefrom that no translation function means may thus be disclosed or suggested by the teaching of document D1. The reason is that document D1 only considers one type of a policy target, i.e. routing. It would seem that the traffic controller already includes the commands necessary for this task. Hence, it is not apparent by which cause the skilled reader of document D1 is prompted to take any amendment of the teaching of document D1 into account. It is respectfully mentioned in this connection that also the referenced Written Opinion is silent about this point.

Further, it is also remarked that it was not possible on this side to find the text passage disclosing that a *"traffic handling policy is … distributed to the interface nodes"*. It would rather seem that it are only the decisions made by the traffic controller which are effected by the interface nodes, but no policy or policy rules are distributed, not to mention any translation thereof. However, it is respectfully asked to

cite a text passage unambiguously disclosing or suggesting this assertion.

In contrast to the teaching of document D1, the present invention seeks to enforce a certain overall quality-of-service policy. That is, a policy which takes all details into consideration, particularly all manageable parameters of specific network implementations which are reflected in the radio resource management means. According to the present invention as claimed by the present claims 1 and 6, this is defined in connection with the description of an "*information model*" being implemented in a central controller ("*control center means*" - claim 1; "*central controlling point*" - claim 6).

Stated in other words, the method and system according to the present invention are not only impacting the routing but also e.g. whether packets of a certain kind of user can be delayed, discarded etc.

In summary, it is held on this side that the above differences are at least reflected by the features of an "*implementation model*" being "*implemented in … control center means*" and "*translation function means*" as regards the present system claim. In addition, due to the above emphasized reasons, these features cannot be suggested by document D1, even not when combined with the general knowledge of the skilled person, contrary to what is set forth in the referenced Written Opinion. Thus, it is rather held that the subject matter of present claim 1 is based on an inventive step. It is respectfully requested to indicate the same.

Now, turning over to the method according to the present invention as defined by present claim 6, as far as there is indeed a correspondence between the present independent

system claim and this method claim, i.e. as regards the step of "*defining an information model*", the above applies *mutatis mutandis*.

Already for this reason it is considered that also the subject matter of claim 6 involves an inventive step in view of document D1 when combined with the general knowledge of a skilled person.

However, it is held that the detailed steps as defined by present claim 6 are for their most part not shown by document D1. It is respectfully submitted that the rather brief assessment set forth in the referenced Written Opinion appears to be a rather stretched understanding of an implicit disclosure, all the more since no explicit reference to text passages is made.

Only serving as an example, the step of "*building policy rules for the execution of certain actions in dependency of the occurrence of certain conditions among said manageable parameters*" has no direct correspondent in the system claim (claim 1). That is, already due to that, the assumption set forth in the referenced Written Opinion underlying the judgement on present claim 6 does not appear to be correct.

Therefore, in summary, it is respectfully requested to reconsider the present case, and to submit as result of the preliminary examination that the issues underlying the same are to be considered positive.

Jürgen Faller
Patentanwalt
TBK-Patent

PATENT COOPERATION TREATY

From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:

TBK-Patent
Leson, Thomas J A
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80336 MÜNCHEN

PCT

WRITTEN OPINION

(PCT Rule 66)

Date of mailing *(day/month/year)*	19 -12- 2003
Applicant's or agent's file reference: WO 34284	**REPLY DUE** within 60 days from the above date of mailing

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/IB02/01194	12-04-2002	---

International Patent Classification (IPC) or both national classification and IPC7
H04L 12/56, H04Q 7/24

Applicant
Nokia Corporation et al.

1. This written opinion is the first (first, etc.) drawn by this International Preliminary Examining Authority.
2. This opinion contains indications relating to the following items:
   - I ☒ Basis of the report
   - II ☐ Priority
   - III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
   - IV ☐ Lack of unity of invention
   - V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
   - VI ☐ Certain documents cited
   - VII ☐ Certain defects in the international application
   - VIII ☐ Certain observations on the international application
3. The applicant is hereby **invited to reply** to this opinion.
   - **When?** See the time limit indicated above. The applicant may, before the expiration of that time limit, request this Authority to grant an extension, see Rule 66.2(d).
   - **How?** By submitting a written reply, accompanied, where appropriate, by amendments, according to Rule 66.3. For the form and the language of the amendments, see Rules 66.8 and 66.9.
   - **Also** For an additional opportunity to submit amendments, see Rule 66.4. For the examiner's obligation to consider amendments and/or arguments, see Rule 66.4*bis*. For an informal communication with the examiner, see Rule 66.6.

   If no reply is filed, the international preliminary examination report will be established on the basis of this opinion.
4. The final date by which the international preliminary examination report must be established according to Rule 69.2 is: 12-08-2004

Name and mailing address of the IPEA/SE	Authorized officer
Patent- och registreringsverket Box 5055 S-102 42 STOCKHOLM Facsimile No. 08-667 72 88 Telex 17978 PATOREG-S	Anders Edlund /LR Telephone No. 08-782 25 00

WRITTEN OPINION

International application No.
PCT/IB02/01194

I. Basis of the opinion

1. With regard to the **elements** of the international application:*

☒ the international application as originally filed

☐ the description:
pages _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____

☐ the claims:
pages _____, as originally filed
pages _____, as amended (together with any statement) under article 19
pages _____, filed with the demand
pages _____, filed with the letter of _____

☐ the drawings:
pages _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____

☐ the sequence listing part of the description:
pages _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.
These elements were available or furnished to this Authority in the following language _____ which is:

☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).

☐ the language of publication of the international application (under Rule 48.3(b)).

☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the written opinion was drawn on the basis of the sequence listing:

☐ contained in the international application in printed form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

☐ the description, pages _____

☐ the claims, Nos. _____

☐ the drawings, sheet/fig _____

5. ☐ This opinion has been drawn as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2 (c)).

* *Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed".*

V. Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-9	YES
	Claims		NO
Inventive step (IS)	Claims		YES
	Claims	1-9	NO
Industrial applicability (IA)	Claims	1-9	YES
	Claims		NO

2. Citations and explanations

Reference is made to the following documents:
D1: WO 0176286 A
D2: EP 1059792 A
D3: WO 0158177 A
D4: Blight D C ET AL: "A policy-based networking architecture for QoS interworking in IP management-scalable architecture for large-scale enterprise-public interoperation"

Document D1 relates to traffic management in a multi-bearer packet data network. A multi-bearer network, or an MBN, is a network having the capability to carry a data packet via one of several alternative bearers.

D2-D4 are state of the art documents and will therefore not be mentioned anymore.

The object of the invention is to solve the problem of quality of service management which occurs in a multi-radio access network.

Claim 1:
From D1, which is considered to represent the most relevant document, is a method known for routing data packets to a mobile node from its correspondent node, via a multi-bearer network. A node (see page 7 line 35 - page 10 line 25), called SSN (service support nodes), provides centralized administration and distribution of traffic policies (see Figures 3 and 4). The SSN node set (which includes a TPC, RCU and MMU) combines the MN-specific subscriber preference information and operator-specific policy information into an

.../...

Supplemental Box
(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of: Box V

MN-specific traffic handling policy which the SSN node set uses to make decisions concerning cell and/or channel selection. The MN-specific traffic handling policy is also distributed to the interface nodes which route the packets of ongoing sessions. On page 13 line 1-30 it is stated that the TPC uses the ACAL table (which combines the subscriber's preference, the MBN operator's traffic policies, and available traffic/resource information (resource availability data) obtained from the RCU) to select a downlink bearer.

The invention according to claim 1 differs from D1 in terminology and that the control center includes translation means adapted to translate said rules in a form executable by said plurality of policy based radio resource management means. In D1 it is just mentioned that the MN-specific traffic handling policy is distributed to the interface nodes.

The effect of this feature is to adapt the policies to be understandable to the different bearer networks.

The problem underlying the present application is consequently, that D1 should be improved in order to support this feature.

It is mentioned in D1 the MN-specific traffic handling policy is also distributed to the interface nodes which route the packets of ongoing sessions. It is also known that D1 includes a plurality of different bearer networks. For a person skilled in the art, it is considered obvious that a rule sent to a particular bearer network in a multi bearer network might need to be adapted according to that network in order to be understandable in that particular bearer network. Therefore, the invention according claim 1 is not considered to involve an inventive step.

Claim 6:
The invention according to claim 6 differs from D1 in terminology. The technical features In D1 (see references above) are considered to correspond to the features described in claim 6 of the inventions. Therefore, the invention according to claim 6 is not considered to involve an inventive step.

Claims 2-5 and 7-9:
In these claims, are other technical features stated for

.../...

Supplemental Box
(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of: Box V

policies and QoS management. These claims differ from the invention claimed in claims 1 and 6 in obvious details concerning policies and QoS management. The inclusions of such features are regarded as part of customary praxis a skilled person would consider in accordance with circumstances. From that described in these claims, it is considered obvious for a person skilled in the art, with the knowledge of D1, to accomplish a method for policies and QoS management as described in these claims. Therefore, the invention claimed in claims 2-5 and 7-9 is not considered to involve an inventive step.